(FILE 'HOME' ENTERED AT 09:35:05 ON 18 APR 2005)

	FILE	'CAPLU	JS '	' ENTERED AT 09:35:09 ON 18 APR 2005	
L1		1682	S	?FLAVON?(L)?ESTROGEN?	
L2		29	S	L1 AND BENZOPYRA?	
L3		0	S	L2 AND ?ISOSTER?	
L4		2	S	L1 AND ?ISOSTER?	
L5		145	S	?ESTROGEN? AND BENZOPYRA?	
L6		0	S	L5 AND ?ISOSTER?	
L7		51	S	L5 AND P/DT	
L8		5	S	L7 AND PY<1991	
L9		31	S	L7 AND PY<2001	
L10		20	S	L9 AND US/PC	
L11		0	S	L5 AND (BENZOYPRAN? (5W) ON?)	
L12		26	S	L5 AND BENZOPYRANO?	
L13		10	S	L12 AND P/DT . '	
L14		7	S	L13 AND US/PC	

```
DN
     140:391197
ΤI
     Preparation of benzopyranone compounds for modulating
     estrogen receptor expression
IN
     Renaud, Johanne; Missbach, Martin; McKie, Jeffrey A.; Bhagwat, Shripad S.
     Switz.
PA
SO
     U.S. Pat. Appl. Publ., 26 pp., Cont.-in-part of U.S. Ser. No. 125,965.
     CODEN: USXXCO
DT
     Patent
     English
LΑ
FAN.CNT 3
     PATENT NO.
                            KIND
                                     DATE
                                                  APPLICATION NO.
                             ____
PΙ
     US 2004092572
                             Α1
                                     20040513
                                                  US 2003-412997
                                                                             20030414 <--
     US 6620838
                              В1
                                     20030916
                                                  US 2002-125965
                                                                             20020419 <--
     CA 2482986
                             AA
                                     20031030
                                                  CA 2003-2482986
                                                                             20030418
     WO 2003089422
                             A1
                                     20031030
                                                  WO 2003-US12283
                                                                             20030418
              AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
               CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
              GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
              LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
          PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
               FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,
               BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
     EP 1497277
                                     20050119 EP 2003-733871
                             Α1
                                                                             20030418
          R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
               IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
                             A2
PRAI US 2002-125965
                                     20020419
     US 2003-412997
                              Α
                                     20030414
                              W
                                     20030418
     WO 2003-US12283
OS
     MARPAT 140:391197
GΙ
```

ANSWER 1 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN

L14

AN

2004:392330 CAPLUS

Benzopyranone compds. of formula I [R = H, acyl, etc.; X = H, AΒ halo, CF3; Y = halo, CF3; n = 2-4] are prepared for modulating gene expression in a cell expressing estrogen receptor (ER). The compds. of formula I wherein R is H can be prepared by demethylation of the corresponding phenolic Me ether. The compds. are useful for treating a bone-resorbing disease, cancer, arthritis or an estrogen-related condition such as breast cancer, osteoporosis, endometriosis, cardiovascular disease, hypercholesterolemia, prostatic hypertrophy, prostatic carcinomas, obesity, hot flashes, skin effects, mood swings, memory loss, and adverse reproductive effects associated with exposure to environmental chems. or natural hormonal imbalances. Thus, II was prepared from (2-chloro-4-trifluoromethylphenyl)acetic acid, 1-(2-hydroxy-4methoxyphenyl)-2-(4-hydroxyphenyl)ethan-1-one and 1-(2chloroethyl)pyrrolidine hydrochloride. The IC50 of II against MCF-7 breast cancer cell was 4.5 nM. L14 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN AN 2003:855919 CAPLUS DN 139:350634 Preparation of benzopyranone compounds as inhibitors of ΤI interleukin 6 release, antitumor agents, etc. McKie, Jeffrey A.; Bhagwat, Shripad S.; Renaud, Johanne; Missbach, Martin ΙN Signal Pharmaceuticals, Inc., USA; Novartis A.-G. PΑ SO PCT Int. Appl., 63 pp. CODEN: PIXXD2 DTPatent LΑ English FAN.CNT 3

```
PATENT NO.
                        KIND
                                          APPLICATION NO.
                                                                  DATE
                               DATE
     -----
                         ----
                               -----
                                           ------
                                                                  -----
PΙ
    WO 2003089422
                                20031030
                                         WO 2003-US12283
                         A1
                                                                  20030418
        W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
            CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
            GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
            LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
             PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ,
            UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
        RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
            KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
            FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,
            BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
    US 6620838
                                20030916
                                           US 2002-125965
                         В1
                                                                  20020419 <--
    US 2004092572
                                           US 2003-412997
                         Α1
                                20040513
                                                                  20030414 <--
     CA 2482986
                         AA
                                20031030
                                           CA 2003-2482986
                                                                  20030418
     EP 1497277
                         A1
                                20050119
                                           EP 2003-733871
                                                                  20030418
            AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
PRAI US 2002-125965
                         Α
                                20020419
    US 2003-412997
                         Α
                                20030414
    WO 2003-US12283
                         W
                                20030418
OS
    MARPAT 139:350634
GΙ
```

AB The title compds. I [A = (CH2)n; n = 2 to 4; R1 = H, COR2, etc.; R2 = alkyl, etc.; X = H, halo, etc.; Y = halo, etc.] are prepared I are useful for treating a bone-resorbing disease, cancer, arthritis or an estrogen-related condition such as breast cancer, osteoporosis, endometriosis, cardiovascular disease, hypercholesterolemia, prostatic hypertrophy, prostatic carcinomas, obesity, hot flashes, skin effects, mood swings, memory loss, and adverse reproductive effects associated with exposure to environmental chems. or natural hormonal imbalances. Compds. of this invention inhibit both MCF-7 breast cancer and BG-1 ovarian carcinoma cell proliferation; they showed IC50 values of 1.4 nM to 13.6 nM against BG-1 ovarian carcinoma cells and IC50 values of 3 nM to 13.6 nM against MCF-7 breast cancer cells.

RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
L14 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN
```

AN 2003:730534 CAPLUS

DN 139:261167

TI Preparation of benzopyranones for inhibiting interleukin-6

IN Mckie, Jeffrey A.; Bhagwat, Shripad S.; Renaud, Johanne; Missbach, Martin

PA Signal Pharmaceuticals, Inc., USA

SO U.S., 21 pp.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 3

FAIN.	PATENT NO.	KIND DATE	APPLICATION NO.	DATE
PI	US 2004092572	A1 20040513	US 2002-125965 US 2003-412997 CA 2003-2482986	20030414 <
	WO 2003089422		WO 2003-US12283	
			BA, BB, BG, BR, BY, BZ,	
			DZ, EC, EE, ES, FI, GB,	
			JP, KE, KG, KP, KR, KZ,	
			MK, MN, MW, MX, MZ, NO,	
			SG, SK, SL, TJ, TM, TN,	TR, TT, TZ,
		S, UZ, VC, VN, YU,		
			SL, SZ, TZ, UG, ZM, ZW,	
			BE, BG, CH, CY, CZ, DE,	
			LU, MC, NL, PT, RO, SE,	
			GN, GQ, GW, ML, MR, NE,	
			EP 2003-733871	
			GB, GR, IT, LI, LU, NL,	
DDAT			CY, AL, TR, BG, CZ, EE,	HU, SK
PRAI	US 2002-125965			
		A 20030414		
00	WO 2003-US12283	W 20030418		
OS	MARPAT 139:261167			

AB The title benzopyranones [I; n = 2-4; R1 = H, COR2, CO2R2, etc.; R2 = alkyl, aryl, arylalkyl, etc.; X = H, halo, CF3; Y = halo, CF3], useful for treating a bone-resorbing disease, cancer, arthritis or an estrogen-related condition such as breast cancer, osteoporosis and endometriosis, were prepared E.g., a 4-step synthesis of I [n = 2; R1 = H; X = Cl; Y = CF3] (starting from tert-Bu acetate and 3-chloro-4-iodobenzotrifluoride) which showed IC50 of 0.4 nM against IL-6, was given. The compds. I, wherein R1 = H, can be prepared by demethylation of the corresponding phenolic Me ether. Pharmaceutical composition comprising the compound I was claimed.

RE.CNT 87 THERE ARE 87 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1997:809720 CAPLUS

DN 128:61504

TI Preparation of chromenoquinoline derivatives and analogs as steroid receptor modulator compounds and methods of their use

IN Jones, Todd K.; Zhi, Lin; Edwards, James P.; Tegley, Christopher M.; West, Sarah J.

PA Ligand Pharmaceuticals Inc., USA

SO U.S., 129 pp., Cont.-in-part of U.S. Ser. No. 363,127, abandoned. CODEN: USXXAM

DT Patent

LA English

FAN.CNT 12

	PAT	CENT :	NO.			KINI		DATE				ICAT					ATE		
ΡI	US	5696	127					1997	1209								 9950:	 605	<
		2208							0627										`
	_	9619							0627										
		9619							1212		WO I	J J J - 1	0316	096		1	J J J I .	213	
	"					_					CIT	CD.	~~	D 17	D.,,				
		w:	AM,																
									KG,										
					MW,	MX,	NO,	NZ,	ΡL,	PT,	RO,	RU,	SD,	SE,	SG,	SI,	SK,	ТJ,	
			TM,	TT															
		RW:	ΚE,	LS,	MW,	SD,	SZ,	UG,	ΑT,	BE,	CH,	DE,	DK,	ES,	FR,	GB,	GR,	ΙE,	
			ΙT,	LU,	MC,	NL,	PT,	SE,	BF,	ВJ,	CF,	CG,	CI,	CM,	GA,	GN,	ML,	MR.	
					TD,				-	•	•	•	•	•	·	•	•	•	
	ΑU	9645	977			A1		1996	0710	i	AU 1	996-	4597	7		1:	9951	213	
	ΑU	7172	51			B2		2000	0323										
	ΕP	8005	19			A1		1997	1015]	EP 1:	995-	9440	8 9		1:	9951	213	
		8005																	
											GR.	IT.	LI.	LU.	NL.	SE.	MC.	PT,	TE
	CN	1175		-	•	A	•	1998	0304		CN 1	995-	1977	02	-,	1	9951:	213	
	BR	9510	486						0602										
										•			- 0 1 0 1	_			,,,,,,,		

```
HU 78117
                            A2
                                   19991129 HU 1997-2305
                                                                          19951213
                                   20001004 EP 2000-113914
      EP 1041071
                            A1
                                                                         19951213
          R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE
                            A1 20001004 EP 2000-113915 19951213
      EP 1041066
          R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE
      EP 1043325
                            A1
                                   20001011 EP 2000-113829
                                                                        19951213
      EP 1043325
                            B1
                                   20040616
          R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE
      EP 1043326
                            A1 20001011 EP 2000-113830
                                                                        19951213
          R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE
      EP 1043315
                            A1 20001011 EP 2000-113916 19951213
          R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE
      RU 2191774 C2
                                   20021027 RU 1997-112141 19951213
      AT 252560
                             E
                                   20031115
                                              AT 1995-944089
                                                                          19951213
      EP 1382597
                            A2
                                   20040121
                                              EP 2003-23907
                                                                          19951213
      EP 1382597
                           A3
                                  20040407
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE
     PT 800519 T
AT 269336 E
NO 9702591 A
NO 310617 B1
US 6448405 B1
AU 762398 B2
                                   20040331
                                              PT 1995-944089
                                                                         19951213
                                               AT 2000-113829
                                   20040715
                                                                          19951213
                                   19970814
                                                NO 1997-2591
                                                                          19970606
                                   20010730
                                   20020910
                                                US 1997-947428
                                                                          19971008 <--
AU 762398

AU 762398

NO 2000003550

A 19970814

NO 312098

NO 2000003552

A 19970814

NO 313049

PRAI US 1994-363529

US 1995-462643

US 1995-463231

US 1995-464540

US 1995-464541

US 1995-464541

US 1995-464546

US 1995-465556

AU 1996-45977

EP 1995-944089

WO 1995-US16096

OS MARPAT 128:61504
                                                AU 2000-27761
                                   20030626
                                                                          20000414
                                                NO 2000-3550
                                                                          20000710
                                                NO 2000-3551
                                                                          20000710
                                              NO 2000-3552
                                                                          20000710
OS
     MARPAT 128:61504
GΙ
```

AB Non-steroidal title compds. I-III and analogs (3 addnl. claimed Markush structures) are disclosed [wherein R3 = H, C1-4 alkyl or perfluoroalkyl, CH2OH, aryl, heteroaryl, or (un) substituted allyl, arylmethyl, alkynyl, or alkenyl; R5-R6 = H, F, Cl, Br, iodo, NO2, CO2H, CO2R2, COR2, cyano, CF3, CH2OH, C1-4 alkyl or perfluoroalkyl, OR2, SR2, SOR2, SO2R2, SO3H, S(NR2R7)R2, S(0)(NR2R7)R2, NR2R7, aryl, heteroaryl, etc.; wherein R2 = H, C1-4 alkyl or perfluoroalkyl, aryl, heteroaryl, or (un)substituted allyl, arylmethyl, alkynyl, or alkenyl; R7 = H, C1-4 alkyl or perfluoroalkyl, aryl, heteroaryl, or (un) substituted allyl, arylmethyl, NHR8, or OR8; R8 = H, C1-6 alkyl or perfluoroalkyl, aryl, heteroaryl, (un)substituted allyl or arylmethyl, SO2R2, SOR2; R9, R10 = H, C1-6 alkyl or perfluoroalkyl, aryl, heteroaryl, (un)substituted allyl, arylmethyl, alkynyl, or alkenyl; or R9 and R10 form a 3- to 7-membered ring optionally substituted with F, OR2, or NR2R7; R11-R14 = H, F, Cl, Br, iodo, NO2, CO2H, CO2R2, COR2, cyano, CF3, CH2OH, C1-4 alkyl or perfluoroalkyl, OR2, SR2, SOR2, SO2R2, SO3H, S(NR2R7)R2, SO(NR2R7)R2, NR2R7, aryl, heteroaryl, or (un)substituted allyl, arylmethyl, alkynyl, or alkenyl; X = CH2, O, S, NR7; R16 = H, OH, OR17, SR17, NR2R7, (un)substituted allyl, etc., or alkyl; R17 = alkyl, etc.; R21, R30, R31 = H, C1-4 alkyl, etc.]. The compds. are high-affinity, high-selectivity modulators of steroid receptors, and in particular are agonists or antagonists of progesterone receptors, or antagonists of glucocorticoid receptors. Also disclosed are pharmaceutical compns. incorporating the compds., which are effective in female hormone replacement, modulating human fertility, or treating dysfunctional uterine bleeding, endometriosis, leiomyomas, osteoporosis, cancer of the breast or ovaries, or endometrial cancer; methods for employing the disclosed compds. and compns. for treating patients requiring progesterone receptor agonist or antagonist therapy; intermediates useful in the preparation of the compds., and processes for their preparation As glucocorticoid antagonists, some compds. are useful for modulating carbohydrate, protein, and lipid metabolism, as well as functioning of the cardiovascular, kidney, central nervous, immune, and musculo-skeletal systems. Over 350 synthetic examples are given. instance, title compound IV was prepared in 20% yield from a corresponding coumarinoquinoline derivative by reaction of the coumarin lactone function with MeLi, and reduction of the resulting hemiacetal intermediate with Et3SiH. and either BF3.OEt2 or CF3CO2H. Selected compds. were tested in vitro and/or in vivo for activity at progesterone, androgen, estrogen,

glucocorticoid and mineralocorticoid receptors. In a test for agonist activity at progesterone receptors expressed in CV-1 cells, IV had an efficacy (maximum response) of 138% vs. progesterone, with comparable potency. Five pharmaceutical formulations are described.

- ANSWER 5 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN
- AN1997:772298 CAPLUS
- DN 128:61502
- Preparation of chromenoquinoline derivatives and analogs as steroid ΤI receptor modulator compounds and methods
- Jones, Todd K.; Tegley, Christopher M.; Zhi, Lin; Edwards, James P.; West, IN Sarah J.
- Ligand Pharmaceuticals Inc., USA PΑ
- U.S., 128 pp., Cont.-in-part of U.S. Ser. No. 363,529, abandoned. SO CODEN: USXXAM
- DTPatent
- LΑ English

FAN.CNT 12									
P	ATENT NO.				APPLICATION NO.				
PI U: C: W:	S 5693646 A 2208347 O 9619458 O 9619458		A AA A2 A3	19971202 19960627	US 1995-464360 CA 1995-2208347	19950605 < 19951213 19951213			
		ат д	_		CA, CH, CN, CZ, DE,	חג בב בכ בו			
	GB	GE H	II IS	JP KE KG	KP, KR, KZ, LK, LR,	LT III IN MD			
	MG	MN M	W MX	NO NZ PL	PT, RO, RU, SD, SE,	SG SI SK TJ			
	TM,		,,	110, 112, 112,	11, NO, NO, SD, SB,	50, 51, 58, 10,			
	•		W. SD.	SZ. UG. AT.	BE, CH, DE, DK, ES,	FR GR GR IF			
	IT.	LU. M	IC. NL.	PT. SE. BF.	BJ, CF, CG, CI, CM,	GA. GN. MI. MR			
	NE,	SN, T	D, TG	,,,	,,,,,	G11, G11, 112, 1111,			
A	U 9645977	•	A1	19960710	AU 1996-45977	19951213			
Al	U 717251		В2	20000323					
E:	P 800519		A1	19971015	EP 1995-944089	19951213			
E:	P 800519	•	B1	20031022					
	R: AT,	BE, C	H, DE,	DK, ES, FR,	GB, GR, IT, LI, LU,	NL, SE, MC, PT, IE			
C	N 1175247		Α	19980304	CN 1995-197702	19951213			
	R 9510486		Α	19980602	BR 1995-10486	19951213			
	J 78117		A2	19991129	HU 1997-2305 EP 2000-113914	19951213			
E.	P 1041071		A1			19951213			
_		BE, C			GB, GR, IT, LI, LU,				
E	P 1041066		A1			19951213			
		BE, C		DK, ES, FR,	GB, GR, IT, LI, LU,				
	P 1043325		A1		EP 2000-113829	19951213			
E.	P 1043325 R: AT.	ספי כ	B1	20040616	CD CD IM II III	NI OF MO DE IT			
P.	P 1043326	ъь, с	л, DE, A1		GB, GR, IT, LI, LU, EP 2000-113830				
		BF C			GB, GR, IT, LI, LU,	19951213			
E	P 1043315		A1			19951213			
		BE. C			GB, GR, IT, LI, LU,				
RI	J 2191774	,	C2	20021027		19951213			
	Г 252560		E	20031115		19951213			
E	P 1382597		A2	20040121	EP 2003-23907	19951213			
E	P 1382597		A3			-770			
	R: AT,	BE, C	H, DE,	DK, ES, FR,	GB, GR, IT, LI, LU,	NL, SE, MC, PT, IE			
P'	Г 800519		T	20040331		19951213			
ES	3 2208699		Т3	20040616	ES 1995-944089	19951213			
	Г 269336		E		AT 2000-113829	19951213			
	9702591		A B1	19970814	NO 1997-2591	19970606			
	310617		B1	20010730					
	5 5994544		A B2	19991130		19971008 <			
	J 762398				AU 2000-27761	20000414			
NO	20000035	50	Α	19970814	NO 2000-3550	20000710			

NO 2000003551	A	19970814	NO 2000-3551	20000710
NO 312098	B1	19970814	•	
NO 2000003552	Α	19970814	NO 2000-3552	20000710
NO 313049	B1	20020814		
US 1994-363529	B2	19941222		
US 1995-462643	A	19950605		
US 1995-463231	Α	19950605		
US 1995-464360	Α	19950605		
US 1995-464514	Α	19950605		
US 1995-464541	Α	19950605		
US 1995-464546	Α	19950605		
US 1995-465429	Α	19950605		
US 1995-465556	A	19950605		
AU 1996-45977	A3	19951213		
EP 1995-944089	A3	19951213		
WO 1995-US16096	W	19951213		
MARPAT 128:61502				
	NO 312098 NO 2000003552 NO 313049 US 1994-363529 US 1995-462643 US 1995-463231 US 1995-464360 US 1995-464514 US 1995-464541 US 1995-464546 US 1995-465556 AU 1996-45977 EP 1995-944089 WO 1995-US16096	NO 312098 B1 NO 2000003552 A NO 313049 B1 US 1994-363529 B2 US 1995-462643 A US 1995-463231 A US 1995-464360 A US 1995-464514 A US 1995-464541 A US 1995-464546 A US 1995-465556 A AU 1996-45977 A3 EP 1995-944089 WO 1995-US16096 W	NO 312098 B1 19970814 NO 2000003552 A 19970814 NO 313049 B1 20020814 US 1994-363529 B2 19941222 US 1995-462643 A 19950605 US 1995-463231 A 19950605 US 1995-464360 A 19950605 US 1995-464514 A 19950605 US 1995-464541 A 19950605 US 1995-464546 A 19950605 US 1995-465429 A 19950605 US 1995-465556 A 19950605 AU 1996-45977 A3 19951213 EP 1995-944089 A3 19951213 WO 1995-US16096 W 19951213	NO 312098 NO 2000003552 A 19970814 NO 200003552 A 19970814 NO 2000-3552 NO 313049 B1 20020814 US 1994-363529 B2 19941222 US 1995-462643 A 19950605 US 1995-464360 A 19950605 US 1995-464514 A 19950605 US 1995-464541 A 19950605 US 1995-464546 A 19950605 US 1995-465556 A 19950605 US 1995-465556 A 19950605 AU 1996-45977 A3 19951213 EP 1995-944089 A3 19951213 WO 1995-US16096

AB Non-steroidal title compds. I-III and analogs are disclosed [wherein R3 = H, C1-4 alkyl or perfluoroalkyl, CH2OH, aryl, heteroaryl, or (un)substituted allyl, arylmethyl, alkynyl, or alkenyl; R5-R6 = H, F, Cl, Br, iodo, NO2, CO2H, CO2R2, COR2, cyano, CF3, CH2OH, C1-4 alkyl or perfluoroalkyl, OR2, SR2, SOR2, SO2R2, SO3H, S(NR2R7)R2, S(O)(NR2R7)R2, NR2R7, aryl, heteroaryl, etc.; wherein R2 = H, C1-4 alkyl or perfluoroalkyl, aryl, heteroaryl, or (un)substituted allyl, arylmethyl, alkynyl, or alkenyl; R7 = H, C1-4 alkyl or perfluoroalkyl, aryl, heteroaryl, or (un)substituted allyl, arylmethyl, NHR8, or OR8; R8 = H, C1-6 alkyl or perfluoroalkyl, aryl, heteroaryl, (un)substituted allyl, arylmethyl, SO2R2, SOR2; R9, R1O = H, C1-6 alkyl or perfluoroalkyl, aryl, heteroaryl, (un)substituted allyl, arylmethyl, alkynyl, or alkenyl; or R9 and R1O form a 3- to 7-membered ring optionally substituted with F, OR2,

or NR2R7; R11-R14 = H, F, Cl, Br, iodo, NO2, CO2H, CO2R2, COR2, cyano, CF3, CH2OH, C1-4 alkyl or perfluoroalkyl, OR2, SR2, SOR2, SO2R2, SO3H, S(NR2R7)R2, SO(NR2R7)R2, NR2R7, aryl, heteroaryl, or (un)substituted allyl, arylmethyl, alkynyl, or alkenyl; X = CH2, O, S, NR7; R20 = C1-6 alkyl, (un) substituted allyl, arylmethyl, alkenyl, aryl, or heteroaryl; R21 = H, C1-4 alkyl, (un) substituted allyl, arylmethyl, aryl, or heteroaryl; R30, R31 = H, C1-6 alkyl, etc.]. The compds. are high-affinity, high-selectivity modulators of steroid receptors, and in particular are agonists or antagonists of progesterone receptors. Also disclosed are pharmaceutical compns. incorporating the compds., which are effective in female hormone replacement, modulating human fertility, or treating dysfunctional uterine bleeding, endometriosis, leiomyomas, osteoporosis, cancer of the breast or ovaries, or endometrial cancer; methods for employing the disclosed compds. and compns. for treating patients requiring progesterone receptor agonist or antagonist therapy, and intermediates and processes useful in the preparation of the compds. Over 350 synthetic examples are given. For instance, title compound IV was prepared in 70% yield by Grignard reaction of 2-MeC6H4CH2MqCl with the corresponding coumarinoquinoline in Et20, followed by acid-catalyzed dehydration of the product lactol using p-MeC6H4SO3H in CH2Cl2. Selected compds. were tested in vitro and in vivo for activity at progesterone, androgen, estrogen, glucocorticoid, and mineralocorticoid receptors. In a test for agonist activity at progesterone receptors expressed in CV-1 cells, IV had an efficacy (maximum response) of 231% vs. progesterone, and an equivalent potency (EC50) of 4 nM. Five pharmaceutical formulations are described.

- L14 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN
- AN 1995:708473 CAPLUS
- DN 123:83209
- TI Anti-estrogenic compounds and compositions
- IN Labrie, Fernand; Merand, Yves
- PA Endorecherche Inc., Can.
- SO U.S., 72 pp. Cont.-in-part of U.S. Ser. No. 265,150, abandoned. CODEN: USXXAM
- DT Patent
- LA English
- FAN. CNT 8

FAN.	CNT 8			
	PATENT NO.		APPLICATION NO.	DATE
ΡI	US 5395842	A 19950307	US 1991-801704	19911202 <
	HU 52114	A2 19900628	HU 1989-5469	19891027
	HU 208150	B 19930830		
	JP 2000256390	A2 20000919	JP 2000-62592	19891031
			US 1992-913746	
			WO 1992-CA518	
	WO 9310741			17721201
			HU, JP, KP, KR, LK, MG,	MN MW NO
		RO, RU, SD	110, 01, 111, 141, 110,	mit, mit, mo,
			GB, GR, IE, IT, LU, MC,	NT. DT CE
			GN, ML, MR, SN, TD, TG	
			AU 1992-29393	
				19921201
	AU 681338			
			ZA 1992-9309	
	EP 615448	AI 19940921	EP 1992-923641	19921201
	EP 615448			
			GB, GR, IE, IT, LI, LU,	
			RU 1994-31127	
	IL 103941	A1 20000726	IL 1992-103941	19921201
	JP 2002060384	A2 20020226	JP 2001-207820	19921201
	AT 216880	E 20020515	AT 1992-923641	19921201
	ES 2176190	T3 20021201	ES 1992-923641	19921201
	US 5631249	A 19970520	US 1993-17045	19930212 <

	NO 9402027	A	19940704	NO 1994-2027	19940601
	NO 315234	B1	20030804		
	FI 9402568	Α	19940727	FI 1994-2568	19940601
	US 5840735	Α	19981124	US 1994-285354	19940803 <
	US 6060503	Α	20000509	US 1995-388207	19950221 <
	US 5686437	Α	19971111	US 1995-475710	19950607 <
	US 5686465	Α	19971111	US 1995-485739	19950607 <
	AU 9746772	A1	19980219	AU 1997-46772	19971128
	JP 10273479	A2	19981013	JP 1998-10654	19980122
	JP 3273010	B2	20020408		
	AU 760232	B2	20030508	AU 2000-20637	20000303
	AU 762751	B2	20030703	AU 2000-34056	20000512
	AU 2000034056	A5	20000720		
PRAI	US 1988-265150	B2	19881031		
	US 1989-377010	B2	19890707		
	US 1988-265716	Α	19881101		
	US 1989-322154	Α	19890310		
	JP 1989-286010	A3	19891031		
	US 1991-801704	A	19911202		
	US 1992-917915	A3	19920719		
	JP 1993-509666	A3	19921201		
	JP 1998-10654	A3	19921201		
	WO 1992-CA518	Α	19921201		
	US 1993-17045	A3	19930212		
	US 1994-285354	A2	19940803		
	AU 1996-46606	A3	19960220		
	AU 1997-46772	A3	19971128		
OS	MARPAT 123:83209				
GI					•

$$\mathbb{R}^3$$
 \mathbb{R}^4

AB Title compds. I [Z = alkylene, haloalkylene, oxaalkylene, thiaalkylene, azaalkylene; R1 = substituted phenylene; R2, R4 = H, OH, protected OH; R3 = H, aliphatic] and their 3,4-dihydro derivs. and pharmaceutical compns. containing them were prepared Such pharmaceutical compns. are useful for the treatment of breast cancer or other diseases whose progress is aided by activation of sex steroid receptors. Thus, I [Z = O, R1 = 4-(2-piperidinoethoxy)phenyl, R2, R4 = OH, R3 = Me, II] was prepared from 2,4-(MeO)2C6H3COCl in 9 steps. II had an ED50 for inhibition of ZR-75-1 cells of 2.55X10-10 M.

```
L14
    ANSWER 7 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN
AN
     1994:77518 CAPLUS
DN
     120:77518
ΤI
     Sex steroid activity inhibitors
IN
     Labrie, Fernand; Merand, Yves
PA
     Endorecherche Inc., Can.
SO
     PCT Int. Appl., 227 pp.
     CODEN: PIXXD2
DT
     Patent
LΑ
     English
FAN.CNT 8
```

Ι

PATENT NO. KIND DATE

APPLICATION NO.

DATE

```
PΙ
                                  19930610
     WO 9310741
                           A2
                                              WO 1992-CA518
                                                                       19921201
     WO 9310741
                                  19940203
                           Α3
         W: AU, BB, BG, BR, CA, CS, FI, HU, JP, KP, KR, LK, MG, MN, MW, NO,
             NZ, PL, PT, RO, RU, SD
         RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, SN, TD, TG
     US 5395842
                           Α
                                  19950307
                                             US 1991-801704
                                                                       19911202 <--
     AU 9229393
                           A1
                                  19930628
                                              AU 1992-29393
                                                                       19921201
     AU 681338
                           B2
                                  19970828
     EP 615448
                           A1
                                  19940921
                                               EP 1992-923641
                                                                       19921201
     EP 615448
                                  20020502
                           В1
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, SE
     RU 2142945
                           C1
                                  19991220
                                              RU 1994-31127
     AT 216880
                           Ε
                                  20020515
                                              AT 1992-923641
                                                                       19921201
     NO 9402027
                           Α
                                  19940704
                                              NO 1994-2027
                                                                       19940601
     NO 315234
                          В1
                                  20030804
     FI 9402568
                          Α
                                  19940727
                                              FI 1994-2568
                                                                       19940601
     AU 760232
                          B2
                                  20030508
                                              AU 2000-20637
                                                                       20000303
     AU 762751
                                              AU 2000-34056
                          B2
                                  20030703
                                                                       20000512
     AU 2000034056
                          Α5
                                  20000720
PRAI US 1991-801704
                           Α
                                  19911202
     US 1988-265150
                           B2
                                  19881031
     US 1989-377010
                           B2
                                  19890707
     WO 1992-CA518
                           Α
                                  19921201
     AU 1996-46606
                           Α3
                                  19960220
     AU 1997-46772
                           Α3
                                  19971128
OS
     MARPAT 120:77518
GI
```

- * STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY AVAILABLE VIA OFFLINE PRINT *
- AB Various steroidal and nonsteroidal (diphenylethylene-based) antiestrogens were prepared and/or tested. Pharmaceutical compns. containing various groups and representatives of nonsteroidal compds. are claimed. Included in the disclosure are compds. I [x = 0-6; L and/or G is]a polar moiety separated from the B ring by ≥3 intervening atoms; R1, R2 = bond, alkylene, alkenylene, alkynylene, C6H4, or fluoro analogs of these; B = bond, O, S, Se, SO, SO2, NH, CH(OH), NHCO, OCO, CO2, C6H4, etc.; LG may form N-containing heterocyclic ring; or L = various bivalent groups, mostly CO- or C(S)-based; or G = H, alkenyl, alkynyl, (un) substituted alkyl; Z = alkylene, haloalkylene, (CH2) nO, (CH2) nS, (CH2)nCO, etc.; n = 0-3; R3, R10 = H, OH, halo, alkyl, alkoxy, etc.; R6 = H, alkyl, alkenyl, alkynyl]. For example, compound II was prepared and was 3-fold more active against ZR-75-1 breast cancer cells than its known analog lacking the B-ring Me group. Estradiol derivative III was also prepared and found to act as an antiestrogen and an inhibitor of 17β-hydroxy steroid dehydrogenase.